

## DESCRIPTION OF THE FAUNA:

The small size of this stand and its isolated position within wide tracts of cultivated fields and other cleared lands make its fauna of forest interior species highly vulnerable to edge effects and other impacts of habitat fragmentation. Nonetheless, several species characteristic of bottomland forests have been observed here. These include red-shouldered hawks (*Buteo lineatus*) and barred owls (*Strix varia*), the two large raptors associated with bottomland forests, and eleven species of neo-tropical migrants, among which the Kentucky warbler (*Oporornis formosus*) is probably the most noteworthy as a bottomland hardwoods obligate. The presence of these species is directly attributable to the high quality of this site: the large trees are particularly important as nesting sites for the red-shouldered hawk, barred owl and hairy woodpecker (*Picoides villosus*). The well-developed herb and shrub layer similarly accounts for the presence of the Kentucky warbler, Acadian flycatcher (*Empidonax virescens*) and wood thrush (*Hylocichla mustelina*).

On the other hand, red-tailed hawks (*Buteo jamaicensis*) have also been observed at this site and great-horned owls (*Bubo virginianus*) have been observed nearby (see site report for the Flat River Wildlife Area). It may therefore be only a matter of time before these more aggressive, edge-tolerant species usurp the territories of their forest-inhabiting counterparts, the red-shouldered hawk and barred owl. Additionally, cowbirds, crows, foxes, raccoons and other field or edge species undoubtedly benefit from the wildlife forage plots that are planted throughout this section of the gamelands (including a cornfield located immediately along the edge of this stand). The expansion of the populations of these species, due to this food subsidy, will inevitably occur at the expense of the small remnant of forest interior species that still manage to hang on within the Flat River Bend<sup>3</sup>.

The aquatic species found at this site also appear to represent a vestige of the fauna that was once probably widespread along the lower Flat. Elliptio mussels (probably both *Elliptio complanata* and *E. icterina*) are still fairly common within the area of riffles located on the north side of this tract. Otter (*Lutra canadensis*) and mink (*Mustela vison*) have also been recorded at this site, indicating that this reach of the river supports a fairly healthy base of prey species. Given the high quality of the water in this section of the Flat, there is also a good chance that this section still possesses a population of the Neuse River waterdog (*Necturus lewisii*), state Special Concern. This aquatic salamander was recorded in 1979 at the Old Oxford Road bridge crossing just upstream from the bend (NC Museum of Natural Sciences record).

---

<sup>3</sup> In fact, this may already be occurring. The mere presence of woodland species within this tract does not necessarily imply that successful reproduction is taking place; this site could just as easily be a "sink", where surplus individuals from more viable populations wind up but do not themselves make any significant reproductive contribution.